

**METHOD OF ENHANCING WAVEGUIDE
PHOTOSENSITIVITY AND WAVEGUIDES HAVING
ENHANCED PHOTOSENSITIVITY**

ABSTRACT OF THE DISCLOSURE

A method enhances photosensitivity of an optical element by disposing the optical element in a confinement chamber, introducing a hydrogen-rich atmosphere into the confinement chamber and regulating temperature of the hydrogen-rich atmosphere over a treatment time. The temperature regulation includes increasing the temperature of the hydrogen-rich atmosphere over a portion of the treatment time. A method for producing an optical element includes exposing the optical element to a hydrogen-rich atmosphere for a treatment period of time varying temperature of the hydrogen-rich atmosphere during the treatment period and irradiating the optical element with electromagnetic radiation.